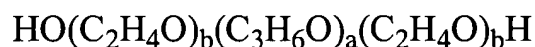


## **Amendments to the Claims**

### **Listing of Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:



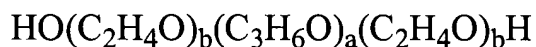
wherein "a" is a number such that the molecular weight of the hydrophobe  $(\text{C}_3\text{H}_6\text{O})_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately less than 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of: ~~expression vectors which encode gene products~~, genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

2. (Previously Presented) The composition of Claim 1, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 2,250 and 15,000 and the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

3. (Previously Presented) The composition of Claim 1, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 3,250 and 15,000 and the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

4. (Previously Presented) The composition of Claim 1 wherein the copolymer is CRL-8131 or CRL-8142.
5. (Previously cancelled).
6. (Previously Presented) The composition of Claim 1 further comprising approximately 0.1% to approximately 5% by weight of a surfactant and approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.
7. (Previously Presented) The composition of Claim 6 wherein the surfactant is polyoxyethylene (20) sorbitan monooleate and the alcohol is ethanol.
8. (Cancelled)
9. (Currently Amended) A method of delivering a molecule to an animal, comprising administering to the animal a composition comprising a nonionic block copolymer, wherein the block copolymer has the following formula:



wherein "a" is a number such that the molecular weight of the hydrophobe  $(\text{C}_3\text{H}_6\text{O})_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately less than 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of: ~~expression vectors which encode gene products~~, genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

10. (Previously Presented) The method of Claim 9, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 2,250 and 15,000 and the hydrophile (C<sub>2</sub>H<sub>4</sub>O)<sub>b</sub> portion of the block copolymer, represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

11. (Previously Presented) The method of Claim 9, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 3,250 and 15,000 Daltons and the hydrophile (C<sub>2</sub>H<sub>4</sub>O)<sub>b</sub> portion of the block copolymer, represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

12. (Currently Amended) The ~~composition~~ method of Claim 9 wherein the copolymer is CRL-8131 or CRL-8142.

13. (Previously cancelled).

14. (Previously Presented) The method of Claim 9, wherein the composition further comprises approximately 0.1% to approximately 5% by weight of a surfactant and approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.

15. (Previously Presented) The method of Claim 14 wherein the surfactant is polyoxyethylene (20) sorbitan monooleate and the alcohol is ethanol.

16. (Cancelled).

17. (Cancelled)

18. (Previously Presented) The composition of Claim 1, wherein the composition further comprises an antimicrobial drug selected from the group consisting of; rifampin, isoniazid,

ethambutol, gentamicin, tetracycline, erythromycin, pyrazinamide, streptomycin, clofazimine, rifabutin, fluoroquinolones, azithromycin, clarithromycin, dapsone, doxycycline, ciprofloxacin, ampicillin, amphotericin B, fluconazole, ketoconazole, pyrimethamine, sulfadiazine, clindamycin, paromycin, diclazaryl, atovaquone, pentamidine, acyclovir, trifluorouridine, AZT, DDI, DDC, forscornat, viral protease inhibitors, ganciclovir, ribavirin, antiviral nucleoside analogs, or a combination thereof.

19. (Currently Amended) The method of Claim 9, wherein the one or more nucleic acid molecules are used for altering gene activity.

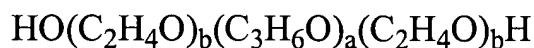
20. (Cancelled)

21. (Currently Amended) The method of Claim 20 "9", wherein the one or more nucleic acid molecules are used for intracellular immunization.

22. (Currently Amended) The method of Claim 20 "9", wherein the one or more nucleic acid molecules are used for hybridization with one or more targeted RNA messages of a cell or virus.

23. (Currently Amended) The method of Claim 20 "9", wherein the one or more nucleic acid molecules are used for supplying a normal copy of a defective gene to an animal.

24. (Currently Amended) A composition consisting essentially of a nonionic block copolymer, wherein the block copolymer has the following formula:

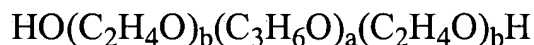


wherein "a" is a number such that the molecular weight of the hydrophobe  $(\text{C}_3\text{H}_6\text{O})_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block

copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately less than 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

25. (Currently Amended) A method of delivering a molecule into a cell, comprising contacting the cell with a composition comprising a nonionic block copolymer, wherein the block copolymer has the following formula:



wherein "a" is a number such that the molecular weight of the hydrophobe  $(\text{C}_3\text{H}_6\text{O})_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately less than 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

26. (Cancelled)

27. (Previously Presented) The method of Claim 25, wherein the one or more nucleic acid molecules are used for altering gene activity.

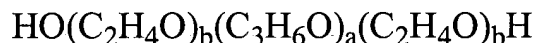
28. (Previously Presented) The method of Claim 25, wherein the one or more nucleic acid molecules encode a gene or an antisense oligonucleotide.

29. (Previously Presented) The method of Claim 28, wherein the one or more nucleic acid molecules are used for intracellular immunization.

30. (Previously Presented) The method of Claim 28, wherein the one or more nucleic acid molecules are used for hybridization with one or more targeted RNA messages of a cell or virus.

31. (Previously Presented) The method of Claim 28, wherein the one or more nucleic acid molecules are used for supplying a normal copy of a defective gene to an animal.

32. (Currently Amended) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:

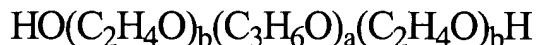


wherein "a" is a number such that the molecular weight of the hydrophobe  $(\text{C}_3\text{H}_6\text{O})_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 500 750 and 1,000 Daltons; and "b" is a number such that the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately less than 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of: genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

33. (Previously Presented) The composition of claim 32, wherein the polyoxyethylene portion of the block copolymer, is approximately 10%-30% of the total weight of the block copolymer.

34. (Currently Amended) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:



wherein "a" is a number such that the molecular weight of the hydrophobe  $(C_3H_6O)_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 4400 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(C_2H_4O)_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately less than 50% of the total weight of the block copolymer, and

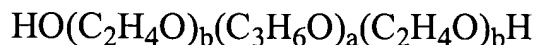
one or more nucleic acid molecules ~~wherein the one or more nucleic acid molecules is~~ selected from the group consisting of: ~~expression vectors which encode gene products,~~ genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof, and,

~~approximately 0.1% to approximately 5% by weight of a surfactant and approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.~~

35. (New) The composition of claim 34, further comprising approximately 0.1% to approximately 5% by weight of a surfactant.

36. (New) The composition of claim 34, further comprising approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.

37. (New) A method for immunizing an animal against a particular gene product comprising administering to an animal a composition comprising a nonionic block copolymer, wherein the block copolymer has the following formula:



wherein "a" is a number such that the molecular weight of the hydrophobe  $(C_3H_6O)_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(C_2H_4O)_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately 50% of the total weight of the block copolymer;

an expression vector, wherein the expression vector contains a gene that codes for the gene product to be immunized against;

and wherein the composition further comprises approximately 0.1% to approximately 5% by weight of a surfactant.

38. (New) The composition of claim 34, further comprising approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.

39. (New) The composition of claim 1, wherein the nucleic acid molecule is an isolated nucleic acid molecule.

40. (New) The method of claim 9, wherein the nucleic acid molecule is an isolated nucleic acid molecule.

41. (New) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:



wherein "a" is a number such that the molecular weight of the hydrophobe  $(\text{C}_3\text{H}_6\text{O})_a$ , represented by the polyoxypropylene portion of the copolymer, is between approximately 4740 and 15,000 Daltons; and "b" is a number such that the hydrophile  $(\text{C}_2\text{H}_4\text{O})_b$  portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is approximately 1% to approximately 50% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of: genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof, and,

approximately 0.1% to approximately 5% by weight of a surfactant.



42. (New) The composition of claim 41, further comprising approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.